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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,503	01/05/2001	Nancy E. Miller	BA4-067	5241

21567 7590 12/08/2003

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EXAMINER	
PHAM, HUNG Q	
ART UNIT	**PAPER NUMBER**
2172	13

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/755,503	MILLER ET AL.	
	Examiner	Art Unit	
	HUNG Q PHAM	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34,36-50,53-65,67,68 and 71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34,36-50,53-65,67,68 and 71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicants amended claims 1, 17, 33, 36-37, 49, 65 and 71, canceled claims 35, 51-52, 66 and 69-70 in the amendment filed on 04/23/2003. Claims 1-34, 36-50, 53-65, 67-68 and 71 are pending. Applicant's arguments with respect to claims 1, 17, 33, 49 and 65 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 65 is objected to because of the following informalities: ***inputting a plurality of query objects into in a data processor***. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 9, 11-12, 14, 16-20, 25, 27-28, 30, 32-34, 36, 41, 43-44, 46, 48-50, 57, 59 and 61-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Billheimer et al. [USP 6,611,825 B1].

Regarding to claims 1 and 17, Billheimer teaches a method, a system, and computer readable medium for representing a document collection (Col. 4, lines 35-48). As shown in FIG. 2 is ***an image device configured to provide a visual image; and digital processing circuitry coupled with the image device*** (Col. 8, line 49-Col. 9, line 6). As shown in FIG. 9, a query can be treated as a document, and projected into the same subspace. A query frequency vector is computed by tokenizing the query and applying the same term normalization and stemming policies that were used on the original collection (Col. 14, lines 10-14). This performs the claimed ***inputting a plurality of query objects into a data processor***; and ***identifying features within each of the plurality of query objects that allow comparison to items of a body of data stored in a database***. The logic then moves to block 226 where the similarity is determined by measuring the distance between the query and the documents by using the cosine (Col. 14, lines 28-31) as the step of ***determining relative relationships between each of the plurality of query objects and the items of the body of data***. The top ranked documents in terms of closeness are then returned as best matches to the query (Col. 14, lines 31-34). As shown in FIG. 11, in order to visualize the mining technique, the axes that correspond to a query is generated as user request (Col. 14, line 57-Col. 16, line 3). Assuming the user entered `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the

scatterplot visualization as in FIG. 20 performs the claimed ***displaying points along a plurality of rays, wherein a position of each of the displayed points corresponds to the determined relative relationship between each respective one of the plurality of query objects and the body of data, wherein a ray is provided for each query object, and wherein displaying includes displaying a point representing a specific one of the items at a first position along one of the rays, which position indicates a determined relative relationship between the item and the ray's query object, and displaying a second point representing the same specific item at a second position along another one of the rays, which second position indicates a determined relative relationship between the item and the second ray's query object.***

Regarding to claim 33, Billheimer teaches a method, a system, and computer readable medium for representing a document collection (Col. 4, lines 35-48). As shown in FIG. 9, a query can be treated as a document, and projected into the same subspace. A query frequency vector is computed by tokenizing the query and applying the same term normalization and stemming policies that were used on the original collection (Col. 14, lines 10-14). This performs the claimed ***identifying features within each of the plurality of query objects that allow comparison to a body of data stored in a database***. The logic then moves to block 226 where the similarity is determined by measuring the distance between the query and the documents by using the cosine (Col. 14, lines 28-31) as the step of ***determining relative relationships between each of the plurality of query objects and the body of data***. The top ranked documents in terms of closeness are then returned as best matches to the query (Col. 14, lines 31-34). As shown in FIG. 11, in order to

visualize the mining technique, the axes that correspond to a query is generated as user request (Col. 14, line 57-Col. 16, line 3). Assuming the user entered `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 performs the claimed ***control an image device to depict points corresponding to data from the database along each of a plurality of rays, wherein positions of the displayed points correspond to the relative relationships, wherein the computer usable code configured to display includes computer usable code configured to display at least a majority of the plurality of rays to have a common origin.***

Regarding to claim 49, Billheimer teaches a method, a system, and computer readable medium for representing a document collection (Col. 4, lines 35-48). As shown in FIG. 2 is ***a data processing device*** (Col. 8, line 49-Col. 9, line 6). As shown in FIG. 9, a query can be treated as a document, and projected into the same subspace. A query frequency vector is computed by tokenizing the query and applying the same term normalization and stemming policies that were used on the original collection (Col. 14, lines 10-14). This performs the claimed ***inputting a plurality of query objects into a data processing device.*** The logic then moves to block 226 where the similarity is determined by measuring the distance between the query and the documents by using the cosine (Col. 14, lines 28-31) as the step of ***determining relative relationships between each of the plurality of query objects and a body of data stored in a database.*** The top ranked documents in terms of closeness are then returned as best matches to the query (Col. 14, lines 31-34). As shown in FIG. 11, in order to visualize the mining technique, the

axes that correspond to a query is generated as user request (Col. 14, line 57-Col. 16, line 3). Assuming the user entered `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 performs the claimed ***control an image device to depict points corresponding to data from the database along each of a plurality of rays, wherein positions of the displayed points correspond to the relative relationships, wherein the computer usable code configured to display includes computer usable code configured to display the plurality of rays to have a common origin, and wherein the computer usable code configured to display includes computer usable code configured to display the plurality of rays as radiating outwardly from the common origin at equally-spaced angles from one another.***

Regarding to claims 2, 18, 34 and 50, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***placing a small graphic entity at an end of each of the plurality of rays to represent a respective one of the plurality of query objects*** (FIG. 20).

Regarding to claims 3 and 19, Billheimer teaches all the claim subject matters as discussed in claims 1 and 17, Billheimer further discloses the step of ***locating the plurality of rays to have a common origin*** (FIG. 20).

Regarding to claims 4, 20 and 36, Billheimer teaches all the claim subject matters as discussed in claims 3, 19 and 33, Billheimer further discloses the step of

locating the plurality of rays to radiate outwardly from the common origin at equally-spaced angles from one another (FIG. 20).

Regarding to claims 9, 25, 41 and 57, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***accessing data corresponding to the occurrence of textual information within a plurality of documents and displaying comprises depicting usage of the textual information within the documents corresponding to portions of the plurality of query objects*** (Col. 15, lines 52-Col. 16).

Regarding to claims 11, 27, 43 and 62, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***representing each of the plurality of query objects and each datum in the body of data as an n-dimensional vector in an n-dimensional vector space*** (FIG. 20).

Regarding to claims 12, 28, 44 and 63, Billheimer teaches all the claim subject matters as discussed in claims 11, 27, 43 and 62, Billheimer further discloses the step of ***calculating a similarity measure between each of the plurality of query objects and each datum of the body of data using some portion of the n-dimensional vectors*** (Col. 14, lines 10-34).

Regarding to claims 14, 30, 46 and 59, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***displaying points corresponding to data from the database along each of the plurality of rays in a two dimensional display, wherein positions of the displayed points correspond to the relative relationships*** (Col. 15, lines 20-51).

Regarding to claims 16, 32, 48 and 61, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***breaking elements into subelements; determining relative relationships between each of the plurality of query objects and the subelements; and displaying points corresponding to the subelements along each of the plurality of rays, wherein positions of the displayed points correspond to the relative relationships*** (Col. 10, lines 6-65).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 5, 15, 21, 31, 37, 47, 53, 60, 65, 67-68 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billheimer et al. [USP 6,611,825 B1] in view of Hazlehust et al. [USP 6,289,353].

Regarding to claims 5, 21, 37 and 53, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of ***displaying includes locating the plurality of rays to have a common origin and further comprising determining a critical distance from the common origin*** (Billheimer, FIG. 20, Col. 15, lines 52-Col. 16, line 3; Col. 17, lines 24-41). Billheimer fails to disclose the claimed ***points on the plurality of rays falling within the critical distance meet or exceed a relevancy threshold and points on the plurality of rays outside the critical distance do not meet the relevancy threshold***, although as in FIG. 18 is the score to determine the results. Hazlehust teaches a method and system for retrieving information by producing a vector space for documents. Hazlehust further discloses a threshold variable specifying the maximum distance that an object can be from a centroid vector and still be considered "close" to the centroid vector (Hazlehust, Col. 21, lines 28-50). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to

modify the Billheimer method and system by applying a threshold as taught by Hazlehust to specify the distance a result document with a query, and by applying the threshold, the displaying of a query's result will be easy to distinguish the closet document that matches with a query.

Regarding to claims 15, 31, 47 and 60, Billheimer teaches all the claimed subject matters as discussed in claim 1, 17, 33 and 49, Billheimer fails to teach the step of ***determining thematic boundaries within each element contained in the database; breaking elements into subelements at the determined thematic boundaries; determining relative relationships between each of the plurality of query objects and the subelements; and displaying points corresponding to the subelements along each of the plurality of rays, wherein positions of the displayed points correspond to the relative relationships***. Hazlehust teaches a method and system for retrieving information by producing a vector space for documents. Hazlehust further discloses the step of ***determining thematic boundaries within each element contained in the database; breaking elements into subelements at the determined thematic boundaries; determining relative relationships between each of the plurality of query objects and the subelements*** (Hazlehust, Col. 4, line 50-Col. 6, line 17). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer method and system by determining a thematic boundaries as taught by Hazlehust and displaying the result of a query as in Billheimer FIG. 20 in order to categorize a document database for querying.

Regarding to claim 65, Billheimer teaches a method, a system, and computer readable medium for representing a document collection (Billheimer, Col. 4, lines 35-48). As shown in FIG. 2 is ***a data processor*** (Billheimer, Col. 8, line 49-Col. 9, line 6). As shown in FIG. 9, a query can be treated as a document, and projected into the same subspace. A query frequency vector is computed by tokenizing the query and applying the same term normalization and stemming policies that were used on the original collection (Billheimer, Col. 14, lines 10-14). This performs the claimed ***inputting a plurality of query objects into a data processor***. The logic then moves to block 226 where the similarity is determined by measuring the distance between the query and the documents by using the cosine (Billheimer, Col. 14, lines 28-31) as the step of ***determining relative relationships between each of the plurality of query objects and a body of data***. The top ranked documents in terms of closeness are then returned as best matches to the query (Billheimer, Col. 14, lines 31-34). As shown in FIG. 11, in order to visualize the mining technique, the axes that correspond to a query is generated as user request (Billheimer, Col. 14, line 57-Col. 16, line 3). Assuming the user entered `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Billheimer, Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 performs the claimed ***displaying a point along a plurality of rays for each of the plurality of query objects, wherein positions of the displayed points correspond to the relative relationships between a respective one of the plurality of query objects and the body of data,*** each axe is identified by a query such as `module`, `fuselage`, or `pounds` as ***a small graphic entity at an end of***

each of the plurality of rays to represent a respective one of the plurality of query objects, and ***displaying comprises displaying the plurality of rays to have a common origin and to radiate outwardly from the common origin at equally-spaced angles from one another***. Billheimer further discloses the step of ***determining a critical distance from the common origin*** (Col. 14, lines 10-34). Billheimer fails to teach the claimed ***points on the plurality of rays falling within the critical distance meet or exceed a relevancy threshold and points on the plurality of rays outside the critical distance do not meet the relevancy threshold***, although as in FIG. 18 is the score to determine the results. Hazlehust teaches a method and system for retrieving information by producing a vector space for documents. Hazlehust further discloses a threshold variable specifying the maximum distance that an object can be from a centroid vector and still be considered "close" to the centroid vector (Hazlehust, Col. 21, lines 28-50). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer method and system by applying a threshold as taught by Hazlehust to specify the distance a result document with a query, and by applying the threshold, the displaying of a query's result will be easy to distinguish the closet document that matches with a query.

Regarding to claim 67, Billheimer and Hazlehust teaches all the claimed subject matters as discussed in claim 65, Billheimer further discloses the step of ***determining relative relationships between each of the plurality of query objects and a body of data stored in a database in the data processor*** (Billheimer, Col. 14, lines 10-14).

Regarding to claim 68, Billheimer and Hazlehust teaches all the claimed subject matters as discussed in claim 65, but fails to disclose the step of ***adjusting the critical distance in response to user input***. However, as illustrated by Billheimer, if a user enters `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 will be display. And obviously, if the user enters another terms for querying, the distance will be adjusted according to the cosine measure (Col. 14, lines 10-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer method by including the step of adjusting the critical distance in order to visualize the result of a query.

Regarding to claim 71, Billheimer and Hazlehust teaches all the claimed subject matters as discussed in claim 65, Hazlehust further discloses the step of ***determining a critical distance from the common origin, wherein points on the plurality of rays falling within the critical distance meet or exceed a relevancy threshold and points on the plurality of rays outside the critical distance do not meet the relevancy threshold*** (Hazlehust, Col. 21, lines 28-50).

7. Claims 6-8, 22-24, 38-40 and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billheimer et al. [USP 6,611,825 B1].

Regarding to claims 6, 22, 38 and 54, Billheimer teaches all the claim subject matters as discussed in claims 5, 21, 37 and 53, but fails to disclose the step of ***adjusting the critical distance in response to user input***. However, as illustrated by Billheimer, if a user enters `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 will be display. And obviously, if the user enters another terms for querying, the distance will be adjusted according to the cosine measure (Col. 14, lines 10-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer method by including the step of adjusting the critical distance in order to visualize the result of a query.

Regarding to claims 7, 23, 39 and 55, Billheimer teaches all the claim subject matters as discussed in claims 1, 17, 33 and 49, Billheimer does not disclose the step of ***re-determining relative relationships between each of the plurality of query objects and the body of data in response to user input; and rearranging the positions of the displayed points in response to re-determining***. However, as illustrated by Billheimer, if a user enters `module`, `fuselage`, and `pounds` as choices for the positive direction of the axes (Col. 18, lines 11-27), the scatterplot visualization as in FIG. 20 will be display. And obviously, if the user enters another terms for querying, the relative relationship will be re-determine and the position will be rearranging according to the cosine measure (Col. 14, lines 10-29). Therefore, it would have been obvious for one of ordinary skill in the art

at the time the invention was made to modify the Billheimer method by including the step of re-determining and rearranging in order to visualize the result of a query.

Regarding to claims 8, 24, 40 and 56, Billheimer teaches all the claimed subject matters as discussed in claims 1, 17, 39 and 49, Billheimer does not explicitly teach the step of ***deleting an element from the body of data in response to user input; re-determining relative relationships between each of the plurality of query objects and the body of data in response to deleting; and rearranging the positions of the displayed points in response to re-determining***. However, in a document database, a document could be added into or deleted from the database, and obviously, when a document is deleted from the database, for example, any document of FIG. 17, the matrix represents the relationships between the query and the document will be changed, also as in FIG. 20. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer system and method by including the step of deleting and rearranging in order to add in or delete a document from the document database.

8. Claims 10, 13, 26, 29, 42, 45, 58 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billheimer et al. [USP 6,611,825 B1] in view of Leivian et al [USP 5,897,627].

Regarding to claims 10, 26, 42 and 58, Billheimer teaches all the claimed subject matters as discussed in claims 1, 17, 33 and 49, Billheimer further discloses the step of

organizing data in the database and the plurality of query objects in an n dimensional space (FIG. 20). Billheimer fails to teach the step of ***reducing a number n of dimensions in which the data in the database and the plurality of query objects are organized to two dimensions using a Sammon projection***. However, Sammon is a nonlinear projection method to map a high dimensional space onto a space of lower dimensionality as taught by Leivian (Leivian, Col. 3, lines 5-67). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Billheimer method and system by using the Sammon method as taught by Leivian to map a high dimensional space to a lower dimensionality in order to give more option of displaying to a user.

Regarding to claim 13, 29, 45 and 64, Billheimer teaches all the claimed subject matters as discussed in claims 12, 28, 44 and 63, Billheimer further discloses ***the similarity measures between each of the plurality of query objects and the body of data are weighted more heavily than the similarity measures among data within the body of data; and wherein displaying comprises displaying points corresponding to the plurality of query objects and points corresponding to the body of data according to the three or fewer dimensions*** (FIG. 20, Col. 14, lines 10-34). Billheimer fails to teach the step of ***reducing a number n of dimensions in which the body of data and the query objects are represented to three or fewer dimensions using a multi-dimensional scaling method***. Sammon is ***a multi-dimensional scaling method*** to map a high dimensional space onto a space of lower dimensionality as taught by Leivian (Leivian, Col. 3, lines 5-67). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the

Billheimer method and system by using the Sammon method as taught by Leivian to map a high dimensional space to a lower dimensionality in order to give more option of displaying to a user.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM Y VU can be reached on 703-305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Examiner Hung Pham
November 26, 2003

KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100